

Vermont Mental Health Performance Indicator Project

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MEMORANDUM

TO: Vermont Mental Health Performance Indicator Project
Advisory Group and Interested Parties

FROM: John Pandiani, Monica Simon, Janet Bramley

DATE: September 13, 2002

RE: September 11 and Mental Health Service Utilization

Since the terror attacks on September 11, 2001, there has been considerable discussion of the mental health consequences of these events and other disasters.^{1,2} At present, research on the impact of these events on mental health service utilization patterns is only beginning to appear. This Performance Indicator Project (PIP) weekly report is designed to contribute to the body of information on the relationship between disasters and mental health service utilization.

Two published studies indicate a clear impact of the attacks on demand for mental health services in New York City. One study reported that calls to LifeNet, New York City's 24-hour 7-day-a-week mental health and referral hotline, increased substantially after September 2001, and had continued to increase through March.³ Much of this increase appeared to be related to a large scale media campaign that publicized LifeNet services. Another study reported that United Behavioral Health (UBH), a major private-sector provider, experienced substantial increases in requests for professional services after September 11.⁴ Interestingly, most requests for service from UBH came from large employers, not individuals, although there was a large increase in prescriptions of anti-anxiety medication written by non-psychiatric physicians.

Method

In order to test for any change in utilization of public mental health services in Vermont that occurred after September 11, 2001, we calculated monthly utilization rates (number of people served and number of services provided) for fiscal years 2000-2002 for each of Vermont's three major community-based mental health programs. These programs include Community Rehabilitation and Treatment (CRT) Programs for adults with severe and persistent mental illness, Adult Mental Health Outpatient Programs (AOP) for adults with less serious emotional, behavioral, or adjustment problems, and Children's Services Programs.

These service utilization rates were analyzed using the interrupted time series analysis technique that was used in our earlier examination of change in the rate at which CRT clients got into trouble with the law after September 11, 2001 (www.state.vt.us/dmh/Data/PIPs/2002/pip053102.pdf).⁵ Interrupted time series analysis is sensitive to long-term trends in the data as well as to changes that occur at the time of the intervention. This procedure provided information on the direction and the statistical significance of changes in the time series that occurred before the event under examination, at the time of the intervention, and after the intervention. For purposes of this analysis, utilization rates for September 2001 through June 2002 were compared to rates for July 1999 through August 2001. A basic interrupted time series approach was used for CRT and AOP programs.

Because the pattern of utilization of Children's Services programs in Vermont is more complex, an interrupted time series analysis that adjusts for this complexity was also used in this analysis. Utilization of Children's Services Programs involves a yearly cycle that corresponds with the school year. In addition, these programs had significant year-to-year growth in utilization rates during this period. For analysis of children's services utilization we also used an adjusted interrupted time series approach that focused on year-to-year month-specific rates of change in utilization rates to measure change between the two time periods.

Results

The results of these analyses indicate that there was no change in the number of people served or the amount of service provided by Vermont's Community Rehabilitation or Adult Outpatient Programs that is associated with the events of September 11, 2001. CRT programs had experienced a small but statistically significant increase in the number of people served (but not the volume of service) during the 26 months before September 2001. There was no significant change in caseload or volume of service between the two time periods or during the following ten months. AOP programs experienced no statistically significant change in either caseload or volume of service during the 26 months before September 2001. There was no significant change between the two time periods, and there was no change in caseload or volume of service during the following ten months.

Children's services programs, on the other hand, experienced a statistically significant increase in volume of service (but not caseload) that was associated with September 2001. Our adjusted time series analysis indicates that the study period began with a statistically significant decrease in the year-to-year rate of change during the pre-September 2001 time period. This decrease was followed by a statistically significant increase in the rate of change for services between August and September of 2001 and a continued increase during the following months. Our simple time series analysis indicates that there was a statistically significant increase in the number of young people served (but not the volume of service) during the pre-September 2001 time period, and there was no change in caseload or volume of service during the following ten months.

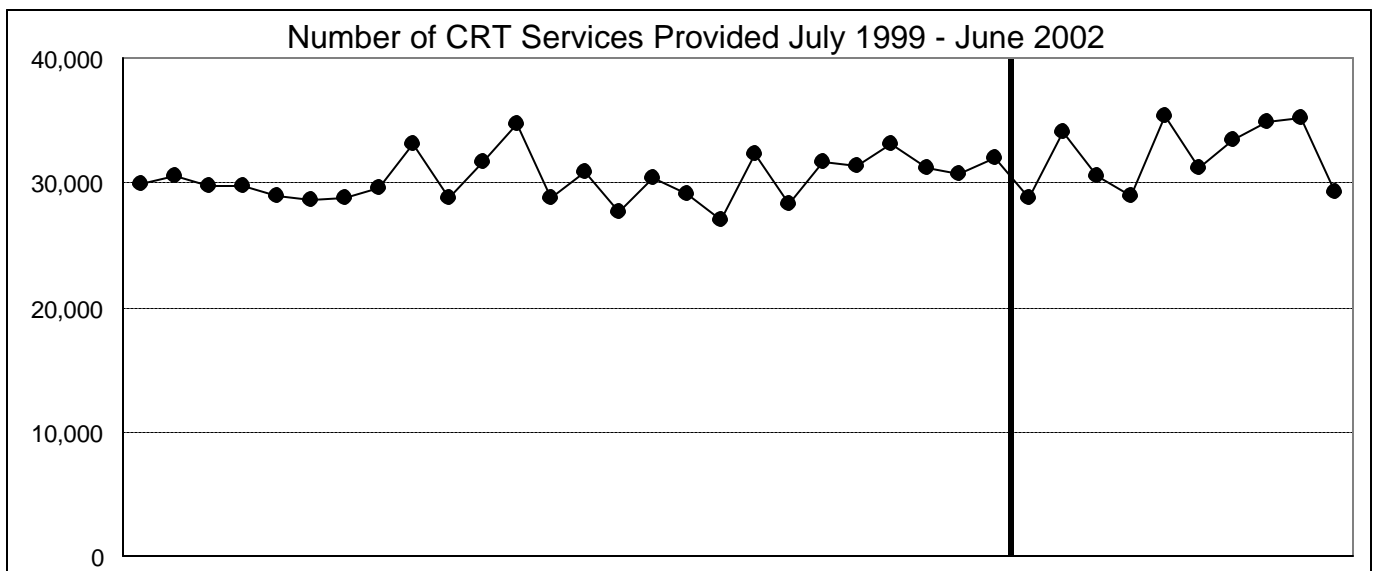
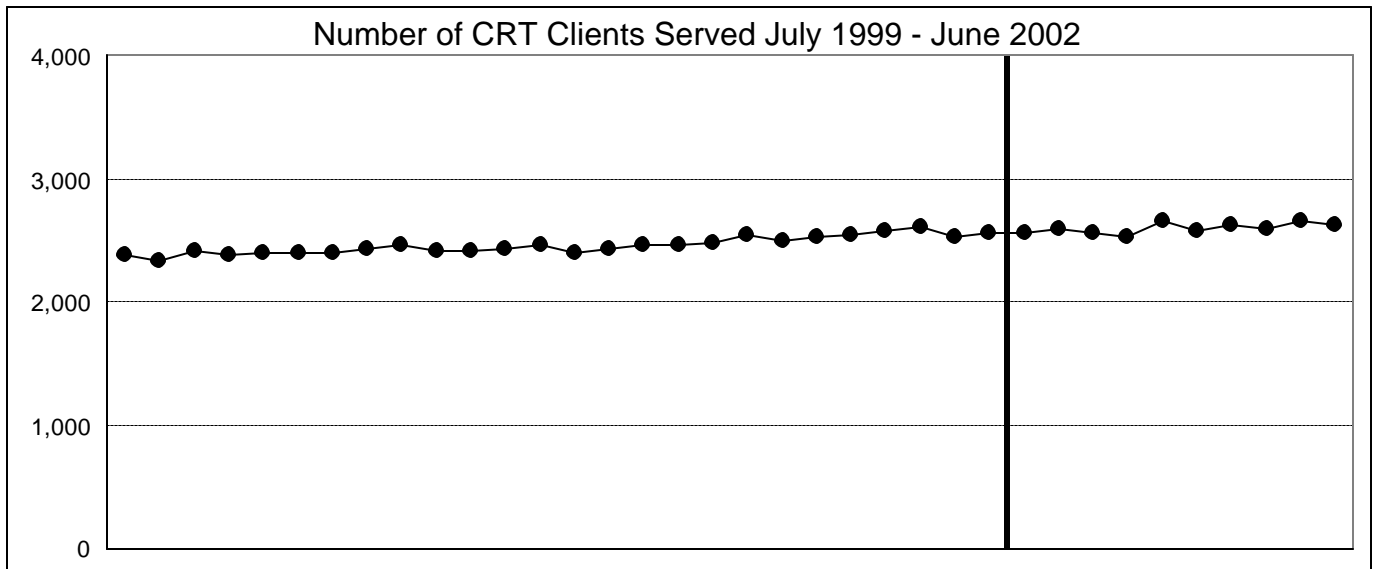
Request for Comments

We will be very interested in your interpretation of these findings. Do you believe these findings reflect an impact of the events of September 11, 2001 on Vermont's system of care for children and adolescents? Do you believe these results reflect some other factor, a "rival causal hypothesis"? As always, your suggestions for further analysis of these data and further research in this area will be appreciated as well. Please e-mail your comments and suggestions to pip@ddmhs.state.vt.us or call 802-241-2638.

References

1. Susser ES, Herman DB, and Aaron B. Combating the terror of terrorism. *Scientific American*. August 2002; 287: 70-77.
2. Herman D, Felton C, and Susser E. Mental health needs in New York State following the September 11th attacks. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*. September 2002; 79(3): 322-331.
3. Wunsch-Hitzig R, Plapinger J, Draper J, and del Campo E. Calls for help after September 11: a community mental health hot line. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*. September 2002; 79(3): 417-428.
4. Goldman W. Terrorism and mental health: private-sector responses and issues for policy makers. *Psychiatric Services*. August 2002; 53(8): 941-943.
5. Pandiani JA, Banks SM, Simon MM, Bramley JA. The Impact of Managed Care and September 11, 2001 on Criminal Justice Involvement for Young Adults with Severe and Persistent Mental Illness. *National Conference on Mental Health Statistics*. May 28 – May 31, 2002 ; Washington, D.C.

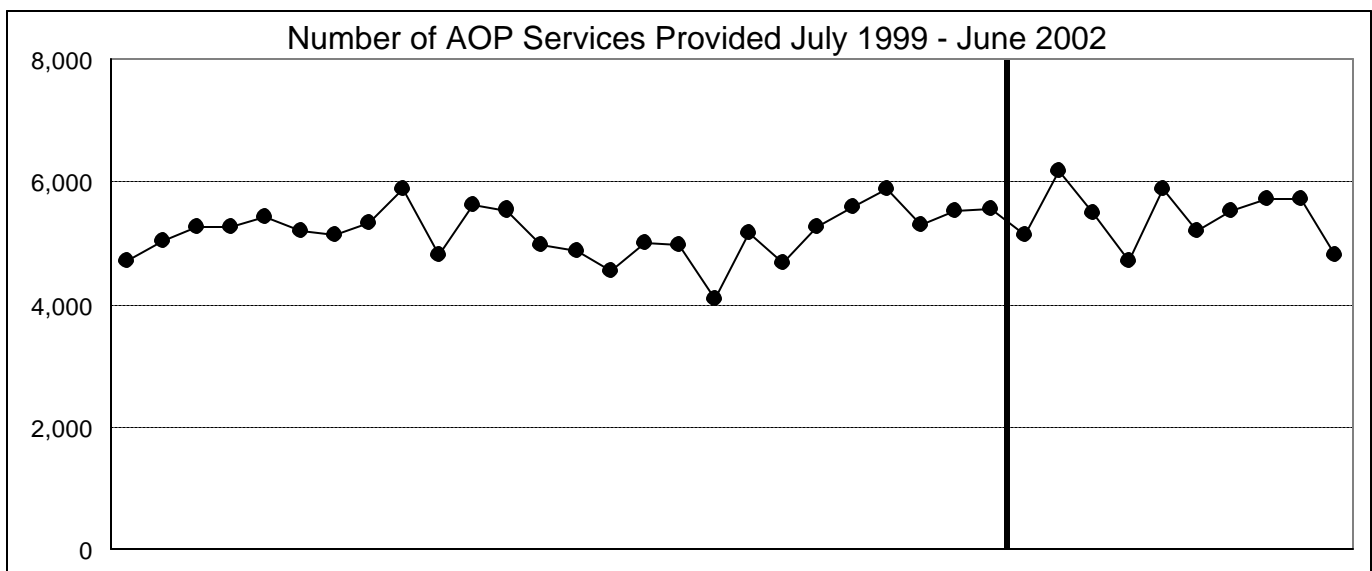
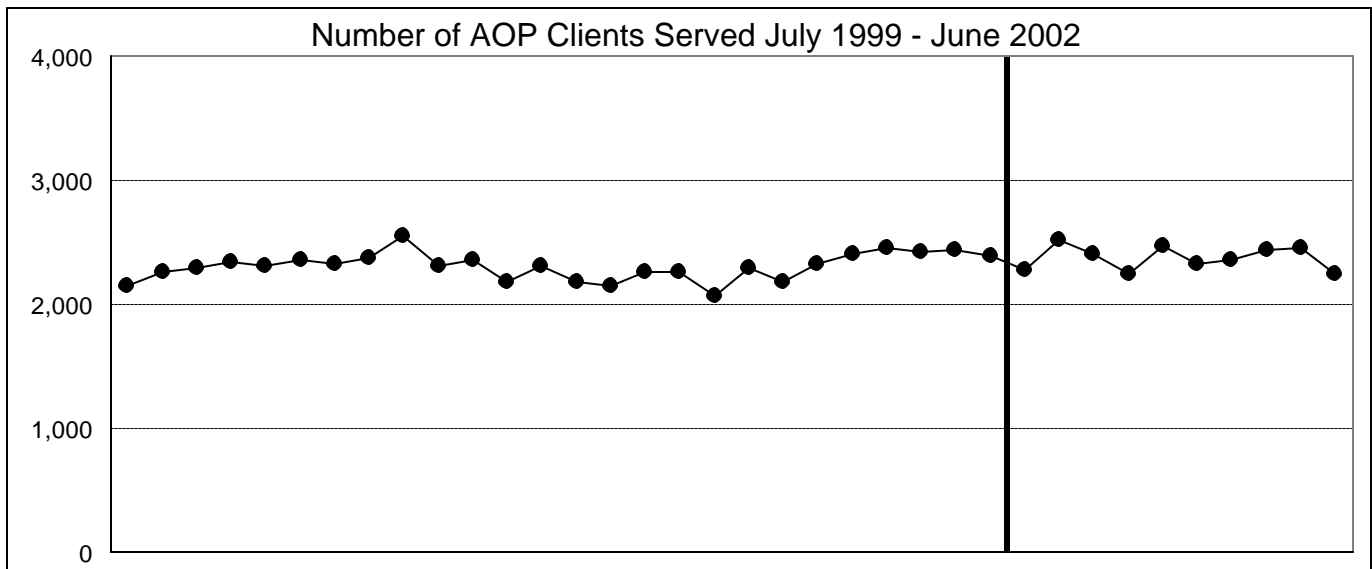
Community Rehabilitation and Treatment Number Served and Services Provided by Month July 1999 - August 2001 and September 2001 - June 2002



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Number Served												
FY00	2,384	2,337	2,417	2,379	2,395	2,397	2,398	2,420	2,451	2,410	2,411	2,427
FY01	2,467	2,402	2,418	2,465	2,455	2,473	2,540	2,490	2,526	2,544	2,576	2,600
FY02	2,531	2,548	2,560	2,596	2,561	2,525	2,655	2,575	2,613	2,591	2,645	2,622
Number of Services Provided												
FY00	29,854	30,540	29,750	29,743	28,852	28,638	28,771	29,544	33,121	28,751	31,687	34,709
FY01	28,745	30,862	27,684	30,436	29,014	27,058	32,219	28,341	31,711	31,272	33,046	31,168
FY02	30,636	32,016	28,752	34,129	30,514	28,852	35,363	31,240	33,461	34,869	35,166	29,335

Analysis is based on Monthly Service Reports submitted to DDMHS by designated agencies.

Adult Outpatient Programs **Number Served and Services Provided by Month** **July 1999 - August 2001 and September 2001 - June 2002**



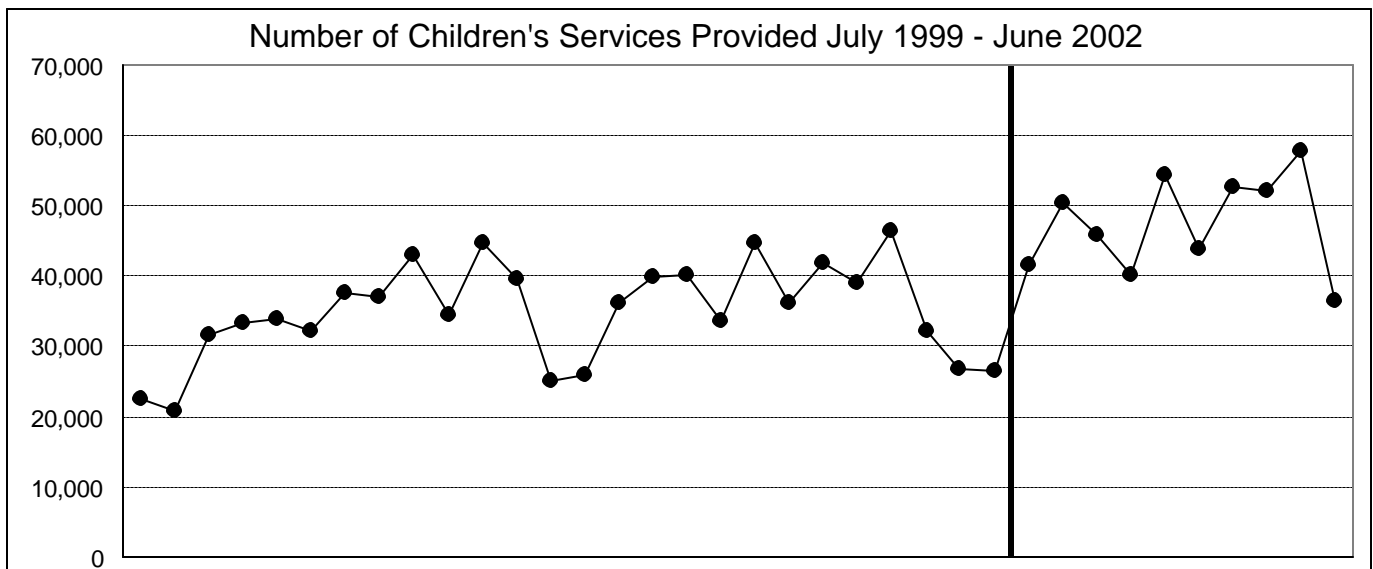
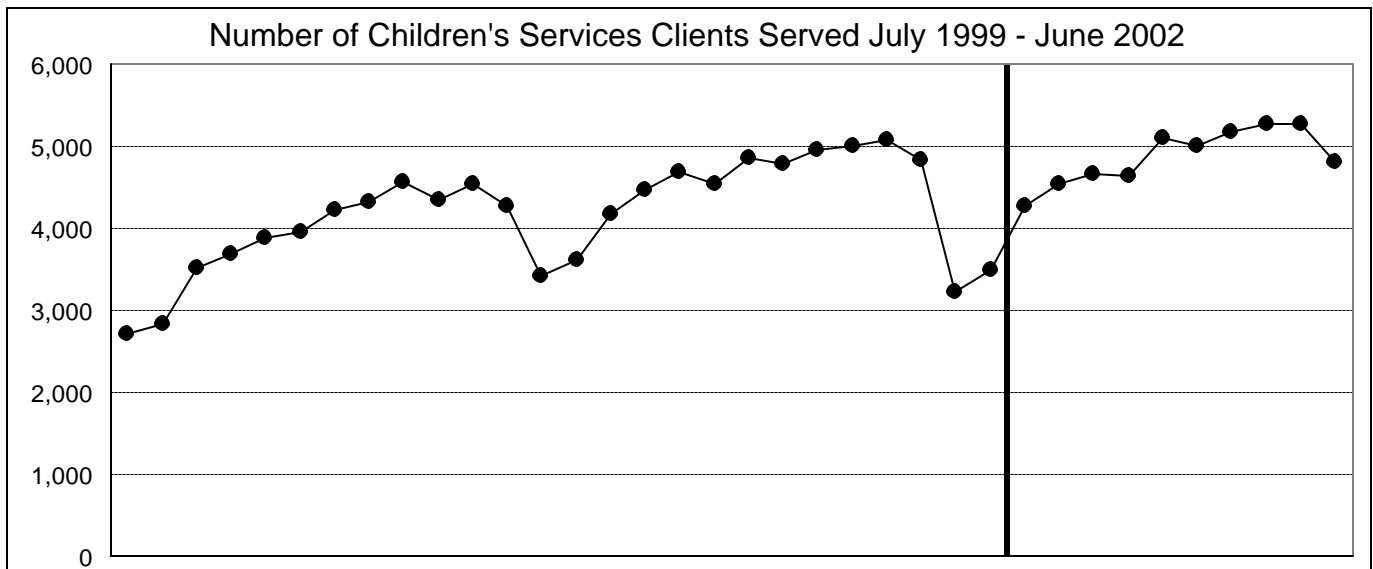
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Number Served												
FY00	2,148	2,255	2,290	2,340	2,307	2,352	2,317	2,371	2,549	2,304	2,358	2,183
FY01	2,305	2,175	2,142	2,258	2,250	2,055	2,293	2,173	2,325	2,396	2,453	2,416
FY02	2,427	2,387	2,281	2,521	2,394	2,235	2,467	2,327	2,356	2,432	2,445	2,246
Number of Services Provided												
FY00	4,706	5,042	5,274	5,254	5,429	5,200	5,125	5,311	5,875	4,808	5,632	5,539
FY01	4,968	4,883	4,545	4,985	4,957	4,081	5,160	4,666	5,249	5,585	5,892	5,305
FY02	5,505	5,552	5,116	6,176	5,490	4,711	5,877	5,206	5,504	5,731	5,725	4,793

Analysis is based on Monthly Service Reports submitted to DDMHS by designated agencies.

Children's Services Programs

Number Served and Services Provided by Month

July 1999 - August 2001 and September 2001 - June 2002



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Number Served												
FY00	2,705	2,824	3,499	3,681	3,865	3,945	4,218	4,301	4,554	4,337	4,519	4,250
FY01	3,420	3,613	4,174	4,448	4,682	4,524	4,855	4,783	4,952	5,002	5,077	4,817
FY02	3,208	3,481	4,251	4,537	4,650	4,629	5,089	4,993	5,175	5,256	5,270	4,794
Number of Services Provided												
FY00	22,434	20,652	31,585	33,335	33,866	32,133	37,509	36,876	42,996	34,458	44,519	39,472
FY01	24,880	25,962	36,019	39,668	39,984	33,671	44,666	36,113	41,744	38,896	46,435	32,141
FY02	26,617	26,489	41,490	50,239	45,701	40,081	54,192	43,725	52,659	52,030	57,737	36,468

Analysis is based on Monthly Service Reports submitted to DDMHS by designated agencies.